## LIQUID FUELS

# (OTIS ANGB)

- 1. Objective. As prescribed in AFI 38-201, Air Force Manpower Determinent (AFMD) System, formerly designated as AFR 8-10, this ANGMS quantifies the full-time manpower requirement to accomplish the tasks described in the work center description (WCD) for varying levels of workload volume.
- 2 Authority. AFI 23-205, Fuels Management, formerly AFR and ANGR 144-1 series of Air Force (AF) and Air National Guard (ANG) directives contain command policy and procedural guidance for the Liquid Fuels work center. This ANGMS has been developed in accordance with procedures contained in AFPAM 38-208, Air Force Management Engineering Program (MEP) Processes, formerly AFR 25-5, 16 May 1988. This ANGMS is the result of a functional review study.
- 3. Applicability. This standard applies only to the 102 Fighter Wing, Massachusetts Air National Guard, Otis ANGB MA, Liquid Fuels work center. This standard applies to peacetime operations only.
- 4. Standard Data:
  - a. Classification. Type III.
  - b. Approval Date. 22 Jun 93.
  - c. Man-hour Data Source. Operational Audit (historical record and technical estimate techniques).
  - d. Standard Man-hour Equation:  $Y = 296.9 + .4278X_1 + .8926X_2 + .02187X_3 + 1.418X_4 + .1248X_5$ .
  - e. Workload Factors (WLFs):
    - (1) Titles:
      - (a)  $X_1 = A$  Gallon of Aviation Fuel Received.
      - (b)  $X_2 = A$  Gallon of Aviation Fuel Issued.
      - (c) X<sub>3</sub> = A Gallon of Cryogenics Product Received.
      - (d)  $X_4 = A$  Quality Control Sample Drawn.
      - (e) X<sub>5</sub> = An Accounting Transaction Processed.
    - (2) Definitions:
- (a)  $X_1$  = The average monthly number of gallons of aviation fuel (in thousands) received by the Fuels work center.
- (b)  $X_2$  = The average monthly number of gallons of aviation fuel (in thousands) issued to a host or transient aircraft by the Fuels work center.
- (c)  $X_3$  = The average monthly number of gallons of liquid oxygen and liquid nitrogen received by the Fuels work center.
- (d) X<sub>4</sub> = The average monthly number of quality control samples drawn (minus the liquid oxygen test) by the Fuels work center.
  - (e)  $X_5$  = The average monthly number of accounting transactions processed by the Fuels work center.
  - (3) Source:
- (a) X<sub>1</sub> = Monthly Fuels Management Data Report (M-34), "Aviation Receipts" page. Under the "Mode" column (Commercial Truck, Government Truck rows), total the "Receipts-Monthly Gallons" column. Divide the total gallons by 1,000 to derive the monthly WLF value.
- (b) X2 = Monthly Fuels Management Data Report (M-34), "Aviation Refuel" page. Under the "Refuel Method" column, add the gallons issued by Refueling Unit and Hot Refuel Pantograph. Sum the total Aviation gallons issued and divide by 1,000 to derive the monthly WLF value.
- (c) X<sub>3</sub> = AF Form 1237, Inventory (Fuels/Missile Propellants), on file in the Fuels work center. Count the number of gallons of Liquid Oxygen received in column "B" of the AF Form 1237 on a calendar month basis to derive the monthly WLF value.
- (d) X4 = AFTO Form 150, Base Fuels Sampling and Testing Record, or computer product on file in the Fuels work center. Obtain the monthly samples drawn count by subtracting the first sample of a calendar month from the last sample of the calendar month. From this total subtract the liquid oxygen odor tests performed to derive the monthly WLF value.
  - (e) X<sub>5</sub> = Monthly Fuels Management Data Report (M-34):
- (1) Aviation Fuels: M-34 Report. Count the total monthly transactions listed under "Method for Refuel/Defuel" for all aviation fuels.
  - (2) Ground Fuels: M-34 Report. Count the total monthly issue transactions for all ground fuels issued.

No. of Printed Pages: 13

OPR: ANGRC/XPME (Maj Castleberry)

Approved by: Maj Gen Killey

Edited by: NGB-ADP (Ms. N. Salch)

Distribution: F, X

(3) Obtain the Monthly transactions processed by adding the Aviation "Refuels/Defuels" and all "Ground Fuels" issued to derive the monthly WLF values.

## 5. Application Instructions:

- a. The valid man-hour range for this ANGMS is 1086.53 through 1810.89.
- b. The AF Form 1113, Standard Manpower Table, is an aggregate of total manpower by specialty title and AFSC. The six categories, Bulk Storage, Fuels Distribution, Cryogenics, Quality Control Inspection, Accounting, and Management are combined to make efficient use of all functional manpower. The application instructions are as follows:
  - (1) Determine the values for the five WLFs identified in paragraph 4e.
- (2) Substitute the appropriate WLF value into the man-hour equation for  $X_1$ ,  $X_2$ ,  $X_3$ ,  $X_4$ , and  $X_5$ . Solve the equation to obtain the total man-hours (Y).
- (3) Divide the total man-hours (Y) by the appropriate civilian Man-hour Availability Factor (MAF) to determine the total manpower requirements.
- NOTE: To determine whole manpower requirements, apply ANG standard application procedures using the Fractional Manpower Range Table.
- (4) On the AF Form 1113, attachment 2, find the column in which the number of total requirements fall, then read up to determine manpower by AFSC.
  - c. Title V and Title 32 positions are represented in this work center.
- 6. Statement of Conditions. This work center's normal hours of operation are 16 hours a day, 5 days a week; plus 8 hours each Saturday. There are no other standard of living constraints which affect the daily operation of this work center.

# PUBLISHED UNDER THE AUTHORITY OF THE SECRETARY OF THE AIR FORCE

PHILIP G. KILLEY
Major General, USAF
Director, Air National Guard

C. DAVID MISKELL Acting Chief Administrative Services 2 Attachments

- 1. Work Center Description
- 2. Standard Manpower Table

#### **WORK CENTER DESCRIPTION**

#### **Liquid Fuels**

#### (Otis ANGB)

#### DIRECT:

- 1. BULK STORAGE OPERATION:
- 1.1. INSPECTS SYSTEM AND PERFORMS PREVENTIVE MAINTENANCE:
- 1.1.1. PERFORMS DAILY INSPECTION AND PREVENTIVE MAINTENANCE.
- 1.1.2. PERFORMS WEEKLY INSPECTION AND PREVENTIVE MAINTENANCE.
- 1.1.3. PERFORMS MONTHLY INSPECTION AND PREVENTIVE MAINTENANCE.
- 1.2. PERFORMS PRODUCT INVENTORY:
- 1.2.1. TRAVELS FOR PRODUCT INVENTORY:
- 1.2.1.1. TRAVELS THROUGH FUEL STORAGE SYSTEM FOR BULK STORAGE INVENTORY.
- 1.2.1.2. TRAVELS TO AND FROM DRUMMED OR PACKAGED PETROLEUM STORAGE AREA FOR PRODUCT INVENTORY.
- 1.2.2. INVENTORIES BULK STORAGE TANK.
- 1.2.3. INVENTORIES DRUMMED OR PACKAGED PETROLEUM PRODUCT.
- 1.2.4. INVENTORIES GASEOUS MISSILE PROPELLANT CYLINDER.
- 1.3. RECEIVES TANK TRUCK SHIPMENT OF BULK PETROLEUM PRODUCT:
- 1.3.1. PREPARES FOR RECEIPT:
- 1.3.1.1. POSITIONS STORAGE TANK RECEIPT VALVE BEFORE AND AFTER RECEIPT.
- **1.3.1.2. INSPECTS TANK TRUCK.** Checks shipping document, inspects seal, verifies fuel level and capacity marker, and performs fuel quality check.
- 1.3.2. RECEIVES PRODUCT.
- 1.3.3. COMPLETES RECEIPT DOCUMENT.
- 1.4. RECEIVES PETROLEUM PRODUCT RETURNED TO BULK FROM MOBILE UNIT:
- 1.4.1. POSITIONS RECEIPT VALVE BEFORE AND AFTER RECEIPT.
- 1.4.2. RECEIVES PRODUCT. Examines fuel flow and monitors fuel system during receipt.
- 1.4.3. COMPLETES RECEIPT DOCUMENT.
- 1.4.4. TRAVELS TO AND FROM BULK STORAGE FOR MOBILE UNIT RETURNED PRODUCT.
- 1.5. ISSUES BY FILLSTAND:
- 1.5.1. PREPARES TO ISSUE.
- 1.5.2. ISSUES PRODUCT. Starts fillstand pump and monitors fuel system.
- 1.5.3. CLOSES OUT ISSUE.

- **1.5.4. TRAVELS TO AND FROM FILLSTAND.** Travels to fillstand for product issue and returns to Fuels Control Center (FCC).
- 1.6. TRANSFERS BULK PETROLEUM PRODUCT TO HYDRANT:
- 1.6.1. PREPARES FOR TRANSFER.
- 1.6.2. ESTABLISHES COMMUNICATION.
- 1.6.3. OPENS VALVE, TRANSFERS PRODUCT, AND CLOSES VALVE.
- 1.6.4. COMPLETES PAPERWORK.
- 1.6.5. TRAVELS TO AND FROM BULK STORAGE AREA.
- 2. FUELS DISTRIBUTION:
- 2.1. MAINTAINS FUELING VEHICLE AND EQUIPMENT:
- 2.1.1. TRANSPORTS VEHICLE AND EQUIPMENT:
- 2.1.1.1. TRANSPORTS VEHICLE AND EQUIPMENT TO MAINTENANCE.
- 2.1.1.2. TRANSPORTS VEHICLE AND EQUIPMENT FROM MAINTENANCE.
- 2.1.2. REVIEWS AND COORDINATES SCHEDULED MAINTENANCE. Reviews vehicle and equipment periodic maintenance schedule; coordinates with FCC, Quality Control and Inspection (QC&I), and Transportation Refueling Maintenance Shop.
- 2.1.3. PERFORMS VEHICLE/EQUIPMENT PREVENTIVE MAINTENANCE CHECKPOINT INSPECTION:
- 2.1.3.1. PREPARES FOR VEHICLE/EQUIPMENT PREVENTIVE MAINTENANCE CHECKPOINT INSPECTION. Obtains inspection form and travels to the inspection point.
- 2.1.3.2. PERFORMS SPECIAL PURPOSE VEHICLE PREVENTIVE MAINTENANCE CHECKPOINT INSPECTION.
- 2.1.3.3. PERFORMS GENERAL PURPOSE VEHICLE PREVENTIVE MAINTENANCE CHECKPOINT INSPECTION.
- 2.1.3.4. PERFORMS NONPOWERED EQUIPMENT PREVENTIVE MAINTENANCE INSPECTION.
- 2.1.3.5. PREPARES VEHICLE/EQUIPMENT FOR TRANSPORTATION TO MAINTENANCE.
- 2.1.4. WASHES VEHICLE. Washes vehicle, cleans cab interior, and cleans component compartment.
- 2.1.5. MAINTAINS VEHICLE OPERATOR OR MAINTENANCE GUIDE.
- 2.2. PERFORMS MOBILE TRAVEL:
- 2.2.1. TRAVELS FROM FCC TO SERVICING LOCATION TO PERFORM REFUEL.
- 2.2.2. TRAVELS AFTER REFUEL:
- 2.2.2.1. TRAVELS TO NEXT SERVICING LOCATION TO PERFORM REFUEL.
- 2.2.2.2. TRAVELS BACK TO FCC.
- 2.2.2.3. TRAVELS TO REFILL POINT:
- 2.2.2.3.1. TRAVELS TO HYDRANT FILLSTAND FOR REFILL.
- 2.2.2.3.2. TRAVELS TO BULK STORAGE FOR REFILL.

- 2.2.3. TRAVELS FROM FCC TO SERVICING LOCATION TO PERFORM DEFUEL.
- 2.2.4. TRAVELS AFTER DEFUEL. Travels to next servicing location or bulk storage and returns to FCC.
- 2.2.4.1. TRAVELS TO BULK STORAGE TO RETURN PRODUCT TO BULK.
- 2.2.4.2. TRAVELS BACK TO FCC.
- 2.3. ISSUES FUEL OR OTHER PRODUCT BY REFUELER:
- 2.3.1. PRECHECKS FUELER.
- 2.3.2. POSITIONS SERVICING UNIT. Annotates time arrived at servicing location, proceeds at crew chief's signal, and positions servicing unit.
- 2.3.3. PREPARES FUELER FOR SERVICING.
- 2.3.4. PERFORMS FUELING OPERATION. Issues product and monitors servicing equipment.
- 2.3.4.1. PERFORMS FUELING OPERATION, 1 700 GALLONS.
- 2.3.4.2. PERFORMS FUELING OPERATION, 701 1500 GALLONS.
- 2.3.4.3. PERFORMS FUELING OPERATION, 1501 2200 GALLONS.
- 2.3.4.4. PERFORMS FUELING OPERATION, MORE THAN 2200 GALLONS.
- **2.3.5. COMPLETES SERVICING OPERATION.** Completes fuel accounting document and prepares fueler for departure.
- 2.3.6. REFILLS TRUCK:
- 2.3.6.1. AWAITS SERVICING.
- 2.3.6.2. REFILLS TRUCK FROM HYDRANT FILLSTAND. Refills truck, completes accounting document, monitors fueling equipment, and contacts FCC.
- 2.3.6.3. REFILLS TRUCK FROM BULK STORAGE. Refills truck, completes accounting document, monitors fueling equipment, and contacts FCC.
- 2.4. DEFUELS FUEL:
- 2.4.1. PRECHECKS FUELER.
- **2.4.2. POSITIONS SERVICING UNIT.** Annotates time arrived at servicing location, proceeds at crew chief's signal, and positions servicing unit.
- 2.4.3. PREPARES FUELER FOR DEFUEL SERVICING.
- 2.4.4. PERFORMS DEFUELING OPERATION:
- 2.4.4.1. PERFORMS DEFUELING OPERATION, 1 700 GALLONS.
- 2.4.4.2. PERFORMS DEFUELING OPERATION, 701 1500 GALLONS.
- 2.4.4.3. PERFORMS DEFUELING OPERATION, 1501 2200 GALLONS.
- 2.4.4.4. PERFORMS DEFUELING OPERATION, MORE THAN 2200 GALLONS.
- **2.4.5. COMPLETES SERVICING OPERATION.** Completes fuel accounting document and prepares fueler for departure.
- 2.4.6. RETURNS PRODUCT TO BULK:

- 2.4.6.1. AWAITS SERVICING.
- 2.4.6.2. RETURNS PRODUCT. Monitors fueling equipment.
- 2.4.6.3. COMPLETES DOCUMENTATION AND CONTACTS FCC.
- 2.5. ISSUES FUEL BY HYDRANT:
- 2.5.1. PRECHECKS HYDRANT SERVICING HOSECART.
- 2.5.2. POSITIONS SERVICING UNIT.
- 2.5.3. PREPARES EQUIPMENT FOR SERVICING.
- 2.6. MAINTAINS HYDRANT PIT/OUTLET:
- 2.6.1. TRAVELS FROM FCC TO HYDRANT PIT/OUTLET AREA.
- 2.6.2. TRAVELS FROM HYDRANT PIT/OUTLET AREA TO FCC.
- 2.6.3. INSPECTS HYDRANT PIT/OUTLET.
- 2.6.4. PREPARES EQUIPMENT REQUIRED FOR REMOVING EXCESS WATER FROM HYDRANT PIT/OUTLET.
- 2.6.5. PUMPS ACCUMULATED WATER FROM HYDRANT PIT/OUTLET.
- 2.6.6. REFERS NOTED DISCREPANCY TO LIQUID FUELS MAINTENANCE.
- 2.6.7. COMPLETES AFTO FORM 39, FUEL SYSTEM INSPECTION AND DISCREPANCY RECORD.
- 2.7. PERFORMS AIRCRAFT TYPE II SINGLE PUMPHOUSE OPERATION:
- 2.7.1. SELECTS TANK AND POSITIONS VALVE FOR REFUEL/DEFUEL.
- 2.7.2. MONITORS FUEL SYSTEM DURING REFUEL/DEFUEL.
- 2.7.3. REPOSITIONS VALVE AND PUMP CONTROL UPON COMPLETION OF REFUEL/DEFUEL.
- 2.8. OPERATES FCC:
- **2.8.1. RECEIVES SERVICE REQUEST.** Receives request from Job Control or other authorized agency and annotates AF Form 824, Daily Fuels Request and Service Log.
- 2.8.2. DISPATCHES FUELS OPERATOR.
- 2.8.3. RECEIVES AND RECORDS INFORMATION. Monitors operation by communicating with operator, records information, and monitors all product movement.
- 2.8.4. RECEIVES AND FILES FUELS CLIPBOARD. Receives and stores fuels clipboard, portable radio, and checklist; compares issue/defuel transaction document with Fuels Log, and makes necessary correction.
- 2.8.5. COORDINATES OPERATOR ASSISTANCE REQUEST.
- 2.8.6. COORDINATES SPECIAL FUEL REQUEST. Receives and coordinates special fuel request prior to aircraft arrival on base.
- **2.8.7. MAINTAINS RECORD OF SPECIFIC DATA.** Maintains record of specific event on reverse side of Fuels Log and informs affected work center.
- **2.8.8. COMPLETES TRANSACTION SUMMARY.** Annotates Fuels Log from AF Form 839, Consolidated Flightline Fuels Service Log; categorizes issues; enters total number of product issues by category; and enters delays in the Fuels Log.

- 2.8.9. MAINTAINS FUELS CONTROL STATUS BOARD CONSOLE AND PERSONNEL QUALIFICATION ROSTER.
- 2.8.10. EMBOSSES AND ISSUES AIRCRAFT FUELING IDENT-A-PLATE.
- 2.8.11. MAINTAINS AND CONTROLS FUELS MANAGEMENT FACILITY AND EQUIPMENT KEY.
- 2.8.12. MAINTAINS HEATING OIL CONTROL LOG (SEASONAL).
- 2.8.13. COORDINATES PRIORITY FUELS REQUEST. Reviews and coordinates request for special mission fuel.
- 2.8.14. MAINTAINS ROSTER. Maintains and verifies vehicle roster, organization tank roster, custodian roster, and cash sales roster.
- 2.8.15. MAINTAINS AND CONTROLS EQUIPMENT AND CHECKLIST. Inventories and checks condition of radio and charger. Ensures clipboard, checklist, and local operational procedure are current.
- 3. CRYOGENIC FLUID SUPPORT:
- 3.1. INSPECTS AND MAINTAINS LIQUID OXYGEN/LIQUID NITROGEN (LOX/LIN) STORAGE TANK:
- **3.1.1. PERFORMS DAILY INSPECTION.** Travels to and from LOX/LIN storage area, reviews technical order (T.O.) form, inspects tank for serviceability, inspects LOX/LIN site, corrects discrepancy, and completes paperwork.
- **3.1.2. PERFORMS PERIODIC INSPECTION (180 DAYS).** Obtains needed tools, travels to and from LOX/LIN storage area, performs inspections in accordance with (IAW) work card, and completes paperwork.
- **3.1.3. PERFORMS SPECIAL INSPECTION (360 DAYS).** Obtains tools and support equipment, travels to and from LOX/LIN storage area, initiates safety procedure, performs inspection, purges tank IAW T.O. and work cards, corrects discrepancy, completes paperwork, and stows equipment.
- 3.2. INSPECTS AND MAINTAINS LOX/LIN TANK MAINTENANCE SUPPORT EQUIPMENT:
- 3.2.1. OBTAINS TOOLS AND TRAVELS TO AND FROM SUPPORT EQUIPMENT STORAGE AREA.
- 3.2.2. INSPECTS AND PERFORMS PREVENTIVE MAINTENANCE PRIOR TO USE AND DURING OPERATION IAW T.O.
- **3.2.3. COMPLIES WITH PREVENTIVE MAINTENANCE REQUIREMENTS.** Removes gauges, transports to precision measurement equipment laboratory (PMEL) for calibration, returns, and reinstalls.
- 3.2.4. COMPLETES PAPERWORK.
- 3.3. PERFORMS NONRECURRING MAINTENANCE. Obtains tools, travels to and from LOX/LIN area, troubleshoots, researches part number, repairs or obtains part, replaces defective part, performs functional check, performs corrosion control, and completes paperwork.
- 3.4. PERFORMS DAILY INVENTORY OF CRYOGENIC PRODUCT.
- 3.5. RECEIVES CRYOGENIC PRODUCT. Connects hose, opens tank fill valves, receives product, monitors quantity gauge, closes tank valves, and documents receipt and product loss paperwork.
- 3.5.1. RECEIVES LOX.
- 3.5.2. RECEIVES LIN.
- 3.5.3. TRAVELS TO AND FROM LOX STORAGE AREA FOR RECEIPT.
- 3.5.4. TRAVELS TO AND FROM LIN STORAGE AREA FOR RECEIPT.

- **3.6. ISSUES CRYOGENIC PRODUCT.** Receives storage tank maintenance form, receives cart and/or ground servicing unit maintenance forms, grounds cart as required, connects hose, opens tank and cart valves, issues product, monitors quantity gauge, closes valves, performs all tasks as required, and completes paperwork.
- 3.6.1. ISSUES TO LOX SERVICING CART.
- 3.6.2. ISSUES TO LIN SERVICING CART.
- 3.6.3. TRAVELS TO AND FROM LOX STORAGE AREA FOR ISSUE.
- 3.6.4. TRAVELS TO AND FROM LIN STORAGE AREA FOR ISSUE.
- 3.6.5. PERFORMS QUALITY CONTROL. Draws sample for odor and purity and completes paperwork.
- 3.7. TRANSFERS CRYOGENIC PRODUCT. Transfers LOX or LIN from one tank to another for inspection.
- 4. PETROLEUM, OIL, AND LUBRICANT (POL) QUALITY CONTROL INSPECTION:
- **4.1. PERFORMS QUALITY CONTROL INSPECTION.** Prepares for inspection by reviewing responsibility, current project, and programs; reviewing previous inspection report of the section to be inspected, IG report, and staff assistance visit report; and gathering required equipment. Inspects facility, equipment, and organizational tank. Reviews management procedure for safety, efficiency, and compliance with directive. Evaluates personnel performance, puts away equipment, briefs supervisor, prepares report, establishes suspense, and files inspection record and report.
- 4.1.1. PERFORMS 90/180 DAY INTERNAL INSPECTION:
- 4.1.1.1. PERFORMS SECURITY INSPECTION.
- 4.1.1.2. PERFORMS TRAINING INSPECTION.
- 4.1.1.3. PERFORMS CRYOGENIC INSPECTION.
- 4.1.1.4. PERFORMS ACCOUNTING/ADMINISTRATION INSPECTION.
- 4.1.1.5. PERFORMS DISTRIBUTION (MOBILE/HYDRANTS) INSPECTION.
- 4.1.1.6. PERFORMS SAFETY INSPECTION.
- 4.1.1.7. PERFORMS BULK STORAGE INSPECTION.
- 4.1.2. PERFORMS EXTERNAL INSPECTION.
- 4.1.3. PERFORMS SPOT CHECK.
- 4.1.4. PERFORMS FOLLOW-ON INSPECTION AFTER DISCREPANCY IS CLEARED.
- 4.1.5. PROVIDES TECHNICAL ASSISTANCE.
- **4.1.6. MAINTAINS DANGER TAG.** Identifies safety hazard, prepares danger tag, and attaches tag to equipment or facility removed from service.
- 4.1.7. REPORTS MATERIAL DEFICIENCY.
- 4.2. PERFORMS POL QUALITY CONTROL TESTING:
- **4.2.1. DRAWS SAMPLE.** Gathers required equipment; draws sample for fuel test from bulk storage, mobile distribution, hydrant distribution, aircraft sump, fuel bowser, support equipment, organizational tank, or cryogenics storage; and puts away equipment.
- 4.2.1.1. DRAWS SAMPLE USING IN-LINE SAMPLER.
- 4.2.1.2. DRAWS SAMPLE USING WEIGHTED BOTTLE METHOD.

- 4.2.1.3. DRAWS SAMPLE USING BACON BOMB.
- 4.2.1.4. DRAWS SAMPLE USING CRYOGENICS SAMPLER.
- 4.2.2. SHIPS SAMPLE TO AREA LABORATORY.
- **4.2.3. PERFORMS FUEL TEST.** Gathers required equipment in laboratory, performs fuel test IAW applicable technical publication, and records result on AFTO Form 150, Base Fuels Sampling and Testing Record, or updates computer.
- 4.2.3.1. PERFORMS TIME FILTRATION TEST.
- 4.2.3.2. PERFORMS PARTICLE ASSESSMENT TEST.
- 4.2.3.3. PERFORMS CRYOGENIC SAMPLER TEST.
- 4.2.3.4. PERFORMS FUEL SYSTEM ICING INHIBITOR (FSII) TEST.
- 4.2.3.5. PERFORMS FUELS SOLIDS DETERMINATION TEST.
- 4.2.3.6. PERFORMS CONDUCTIVITY ADDITIVE TEST.
- 4.2.3.7. PERFORMS VISUAL INSPECTION TEST.
- 4.2.3.8. PERFORMS FREE WATER DETERMINATION TEST (USING AERONAUTICAL ENGINEER LABORATORY [AEL]).
- 4.2.3.9. PERFORMS POTENTIAL HYDROGEN (PH) TEST.
- 4.2.3.10. PERFORMS FIBER TEST.
- 4.2.3.11. PERFORMS MICROSCOPIC ANALYSIS.
- 4.3. MAINTAINS LABORATORY EQUIPMENT:
- 4.3.1. CLEANS AND MAINTAINS SAMPLING EQUIPMENT.
- **4.3.2. MAINTAINS AND ADJUSTS TEST EQUIPMENT.** Performs electrical continuity testing of electrostatic ground wire connection or other test, calibrates inventory equipment, and makes minor adjustment.
- 4.3.3. DISPOSES OF TESTED FUEL AND CHEMICAL.
- **4.3.4. MAINTAINS CRASHED AIRCRAFT SAMPLING KIT.** Inventories, inspects, and replenishes the kit after each use.
- 4.4. PERFORMS INSPECTION RELATED TRAVEL:
- 4.4.1. TRAVELS TO AND FROM DAILY SPOT CHECK.
- 4.4.2. TRAVELS TO AND FROM WEEKLY SAMPLE LOCATION.
- 4.4.3. TRAVELS TO AND FROM 14-DAY SAMPLING LOCATION.
- 4.4.4. TRAVELS TO AND FROM MONTHLY SAMPLE LOCATION.
- 4.4.5. TRAVELS TO AND FROM DELIVERY/SOURCE RECEIPT LOCATION.
- 4.4.6. TRAVELS TO AND FROM 90-DAY LOX/LIN LOCATION.
- 4.4.7. TRAVELS TO AND FROM QUARTERLY/SEMIANNUAL INSPECTION LOCATION.
- 4.4.8. TRAVELS TO AND FROM EXTERNAL INSPECTION LOCATION.
- 5. ACCOUNTING:

- **5.1. AUDITS ISSUE DOCUMENT:**
- 5.1.1. AUDITS AF FORM 1233, BULK STORAGE SUMMARY.
- 5.1.2. AUDITS AF FORM 1232, BULK FUEL ISSUE/DEFUEL SUMMARY; AF FORM 1994, FUELS ISSUE/DEFUEL DOCUMENT (DOD); AND AF FORM 1995, FUELS ISSUE/DEFUEL DOCUMENT (NON-DOD):
- 5.1.2.1. AUDITS AF FORM 1232 AGAINST AF FORMS 1994/1995 OR CONSOLIDATED ISSUE FORM.
- 5.1.2.2. AUDITS AF FORM 1232 AGAINST AF FORM 1233.
- 5.1.3. AUDITS AF FORM 857, USAF PROPELLANT SALE/TRANSFER/RETURN REPORT.
- 5.1.4. AUDITS DD FORM 1348-1, DOD SINGLE LINE ITEM RELEASE/RECEIPT DOCUMENT (FOR CRYOGENICS ISSUE ONLY).
- **5.2. AUDITS RECEIPT DOCUMENT:**
- 5.2.1. AUDITS DEFENSE FUELS SUPPLY CENTER (DFSC) FORM 21.1, SOURCE IDENTIFICATION AND ORDERING AUTHORIZATION (SIOATH) OR EQUIVALENT.
- 5.2.2. AUDITS AF FORM 1231, RECORD OF RECEIPTS; DD FORM 250, MATERIAL INSPECTION AND RECEIVING REPORT; AND COMMERCIAL DELIVERY TICKET.
- 5.2.3. AUDITS DD FORM 250, MATERIAL INSPECTION AND RECEIVING REPORT (FOR CRYOGENIC RECEIPT ONLY). Receives DD Form 250 and/or supplier delivery ticket from cryogenics storage, reviews form for accuracy, and posts receipt quantity to AF Form 1237, Inventory (Fuels/Missile Propellants).
- 5.2.4. AUDITS AF FORM 855, RECORD OF RECEIPTS (OF MISSILE PROPELLANTS).
- 5.3. AUDITS TRANSFER DOCUMENT. Prepares DD Form 1348-1, DoD Single Line Item Release Receipt.
- **5.4. AUDITS INVENTORY DOCUMENT:**
- **5.4.1. PREPARES AF FORM 1234, FUELING UNIT INVENTORY.** Manually prepares AF Form 1234 for each grade of fuel, annotates refueling units in and out of service, computes inventory of units in and out of service, and transfers total to AF Form 1235, Physical Inventory (Fuels/Missile Propellants).
- **5.4.2. AUDITS AF FORM 1235.** Receives AF Form 1235 for each type of fuel product, checks for accuracy, computes totals, and checks Fuels-Strapping charts for conversion.
- 5.4.3. PREPARES/MAINTAINS AF FORM 1237, INVENTORY (FUELS/MISSILE PROPELLANTS).
- 5.5. COORDINATES FOR RESUPPLY OF FUEL:
- **5.5.1. COORDINATES WITH SUPPLIER.** Coordinates via telephone with supplier, Fuel Storage, and Base Supply to schedule delivery. Confirms quantity to be received and resolves discrepancy.
- **5.5.2. COORDINATES WITH APPROPRIATE AGENCY.** Coordinates with Defense Fuel Region (DFR), DFSC, and/or major command (MAJCOM) headquarters to resolve resupply difficulties.
- **5.6. PREPARES REPORT.** Researches, reviews, and prepares report as required by attachment 2 to AFR 144-1, Fuels Management (now designated as AFI 23-205).
- 5.6.1. PREPARES DD-A and L (A) 506 REPORT.
- 5.6.2. PREPARES HAF LEX (D and AR) 7108 REPORT.
- 5.6.3. PREPARES HAF LEY (D & M) 8201 (D33) REPORT.
- 5.6.4. PREPARES LOG SA (SA) 7150 REPORT.

- 5.6.5. PREPARES LOG SA (SA) 7308 REPORT.
- 5.7. PERFORMS TRAVEL:
- **5.7.1. PERFORMS TRAVEL TO AND FROM BASE SUPPLY.** Travels to deliver/pickup automated report, miscellaneous item, or DD Form 1348-1.
- 5.7.2. PERFORMS TRAVEL TO AND FROM BASE CONTRACTING OFFICE.
- **5.8. COMPUTES GAIN/LOSS TOLERANCE ANALYSIS.** Computes gain/loss variance, formulates recommended tolerance for MAJCOM review and approval.
- 5.9. PERFORMS CONSERVATION ANALYSIS.
- **5.10. OPERATES COMPUTER REMOTE:**
- 5.10.1. OPERATES COMPUTER REMOTE TO RETRIEVE D33 AND D05 REPORTS.
- 5.10.2. OPERATES COMPUTER REMOTE TO POST PMEL AUTOMATED MANAGEMENT SUBSYSTEM (PAMS) TRANSACTION.
- 5.10.3. OPERATES COMPUTER REMOTE TO LOAD FUELS TRANSACTION.
- 5.10.4. OPERATES COMPUTER REMOTE TO TRANSFER FUELS FILE.
- 5.10.5. OPERATES COMPUTER REMOTE TO SAVE FUELS FILE.
- 5.10.6. OPERATES COMPUTER REMOTE TO MAKE INQUIRY. REVIEWS COMPUTER MANAGEMENT PRODUCT.
- 5.12. MAINTAINS DOCUMENT CONTROL FILE:
- **5.12.1. FILES ACCOUNTING DOCUMENT.**
- 5.12.2. FORWARDS FILE TO STAGING AREA.
- 6. FUELS MANAGEMENT:
- 6.1. PERFORMS MISSION RELATED TASK:
- 6.1.1. DEVELOPS AND REVIEWS FUELS SUPPORT PLAN.
- 6.1.2. PERFORMS REFUELER REVALIDATION/RECOMPUTATION.
- 6.1.3. REVIEWS AND ANALYZES BULK FUEL GAIN/LOSS OR TOLERANCE/VARIANCE,
- 6.1.4. PROVIDES TECHNICAL GUIDANCE.
- 6.1.5. IMPLEMENTS DIRECTED CHANGE.
- 6.1.6. MANAGES VEHICLE CONTROL OFFICER (VCO) PROGRAM.
- 6.1.7. CONDUCTS ENVIRONMENTAL PROTECTION PROGRAM.
- 6.2. DIRECTS WORK CENTER ACTIVITY:
- 6.2.1. PREPARES FUELS RELATED CORRESPONDENCE.
- 6.2.2. PROVIDES FUELS RELATED GUIDANCE TO UNIT STAFF:
- 6.2.2.1. PROVIDES GUIDANCE TO SAFETY COMMITTEE.
- 6.2.2.2. PROVIDES GUIDANCE TO WAR READINESS MATERIAL (WRM) COMMITTEE.

- 6.2.2.3. PROVIDES GUIDANCE TO POST COMMITTEE.
- 6.3. ADMINISTERS FUELS TRAINING:
- 6.3.1. DEVELOPS AND CONDUCTS (NON UNIT TRAINING ASSEMBLY (UTA)
- 6.3.1.1. DEVELOPS LESSON PLAN AND TRAINING MATERIAL
- 6.3.1.2. CONDUCTS TRAINING.
- 6.3.1.3. DOCUMENTS ACCOMPLISHED TRAINING.
- 6.3.2. PROVIDES SPECIALIZED TRAINING.
- 6.3.3. PREPARES FOR UTA FUELS RELATED TRAING:
- 6.3.3.1. DEVELOPS LESSON PLAN AND TRAINING MATERIAL.
- 6.3.3.2. DOCUMENTS ACCOMPLISHED TRAINING.

**INDIRECT:** Indirect work involves tasks that are not readily identifiable with the work center's specific product or service. The major categories of standard indirect work are Supervision, Administration, Meetings, Training, Supply, Equipment Maintenance, and Cleanup. See AFMS 00AA for the Standard Indirect Description.

STANDARD MANPOWER TABLE												
WORK CENTER/FAC				APPLICABILITY MAN-HOUR RANGE								
Liquid Fuels/FAC 41700T			1086.53 - 1810.89									
AIR FORCE SPECIALTY TITLE	AFSC	GRADE		MANPOWER REQUIREMENT								
Fuels	631X0	CIV	7	8	9	10	11	12	13			
							-					
TOTAL		<b>Y</b>	7	8	9	10	11	12	13			
AIR FORCE SPECIALTY TITLE	AFSC	GRADE		r .	MANI	POWER	RE	QUIRI	EMEN'	7	·	
		1										
											:	
			n>			-						
									-			
pans :												
TOTAL												

AF FORM 1113, Jun 91 (COMPUTER GENERATED). PREVIOUS EDITION IS OBSOLETE.